Persuasive health messages: Affective versus cognitive stimuli and the Marrow Donation Willingness Model

An Honors Thesis (HONRS 499)

by

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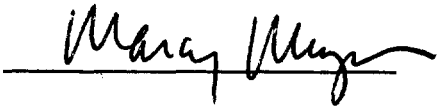

Ball State University

Muncie, Indiana

Submission date: May 4, 1999

Expected date of graduation: May 8, 1999

ACKNOWLEDGEMENTS Thank you to Dr. Marcy Meyer, my thesis advisor, for her endless enthusiasm and encouragement of this project, as well as the patience she has had for me this year. Also, a special thank you to my father, Ray Johnson, without whom I would not have an interest in bone marrow donation or the courage to pursue this topic.

ABSTRACT Cognitive and affective reactions to persuasive health messages have been examined, but few studies have evaluated the effectiveness of such messages in the context of organ donation. Specifically, no studies have examined the consequences of affective versus cognitive stimuli on intent to register to donate bone marrow. The goal of this study was to assess the persuasive value of statistical and narrative evidence in the realm of bone marrow donation. A focus group revealed that narratives are generally the most persuasive type of evidence, that statistics should be used only when framed positively, and that statistical evidence can elicit affective responses. Implications for future research and bone marrow donation campaigns are explored.

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Raychelle A. Johnson

A great deal of the research on persuasive messages in health communication has focused on behavior change in general; a smaller amount has focused specifically on organ donation. However, no research exists on persuasive messages as related to bone marrow donation. The extant research has examined physical and psychological effects among anonymous bone marrow donors, but neglects the impact of persuasive messages on registering to become a potential donor, the focus of the current study.

Bone marrow transplantation is a potential cure for patients whose marrow has stopped producing the correct amounts of various blood cells. Patients ill with leukemia, Hodgkin's disease, sickle-cell anemia and 60 other potentially fatal diseases for whom previous treatments have been ineffective (NMDP, 1998). Bone marrow is similar to blood in that it is comprised of different genetically determined types, called human leukocyte antigen (HLA) types. Family members, especially siblings, are a potential transplant recipient's best resource for a similar HLA type. However, not all patients can find a match among relatives. Thus, the National Marrow Donor Program (NMDP) was founded in 1987 to recruit potential bone marrow donors and match them with individuals in need of bone marrow transplants. There is a relatively small chance (ranging from 1 in 100 to 1 in 1,000,000) of finding a perfect HLA match among an unrelated donor and recipient. Therefore, the NMDP has had to create a large registry, which, according to their web site, included 3.5 million potential donors in 1999. Over 8,000 transplants have been arranged through the NMDP and the number of matches continues to increase each year (NMDP, 1999).

Behind each of those 8,000 transplants have been the personal stories of both the donor and the recipient; intense narratives also surround the patients for whom the NMDP cannot provide a potential donor. For instance, U.S. News & World Report (1990, February 5) featured the story of Allison Atlas, a 20-year-old college student in need of a marrow transplant. Allison would die of leukemia unless a matched donor was found. Because the NMDP database did not provide a match, Allison's family campaigned the Jewish communities of Washington, D.C., Virginia, Maryland, and New York for a match. Out of sympathy and good will, thousands of people lined up to have their blood drawn and tested, hoping to save this young woman's life.

The first step in encouraging more potential donors to register is to explore what types of messages are more likely to persuade them to register with the NMDP. First, this study investigates effective health communication campaign design. Several models will be considered and eventually merged in an attempt to maximize the effectiveness of a persuasive health message encouraging individuals to register with the NMDP. Second, this study examines cognitive and affective reactions to three types of evidence: statistical, narrative, and combination (statistical and narrative). In addition, the effect of prior thought and intent regarding bone marrow donation will also be evaluated. Finally, this study will apply the Organ Donor Willingness Model (Kopfman & Smith, 1996) to facilitate a further understanding of the factors that effect an individual's willingness to register to become a potential bone marrow donor. Due to a lack of literature on bone marrow donation, organ donation will be used as a model for the current study.

Theoretical Framework

Scholars have developed many theories to explain the processes that underlie persuasion; two prevailing models will be explored in the context of bone marrow donation.

Petty and Cacioppo (1986) developed the Elaboration Likelihood Model, which explains persuasion and attitude change. Within this framework, findings on persuasion and attitude change can be categorized in one of two distinct routes to persuasion: the central route or the peripheral route. Persuasion through the central route likely results from careful and thoughtful consideration of the true value of the message presented. In contrast, the peripheral route to persuasion results in attitude change with little or no consideration of the merits of the message presented. Peripheral route persuasion is dependent upon some cue in the persuasion context. Although both routes are persuasive, the central route is believed to produce more enduring results (Ford & Smith, 1991). Thus, it is the central route that is most significant in regard to registration with the NMDP. Registering to become a potential bone marrow donor requires thoughtful consideration of the arguments presented, as well as the enduring memorability of the persuasive message.

Another salient theoretical framework was developed by Fishbein and Azjen (1975). The Theory of Reasoned Action contends that an individual's perceived consequences of a behavior, as well as their evaluation of those consequences, effects their attitude toward the behavior. In addition, the perception of how significant others will perceive the behavior will affect an individual's decision whether or not to comply with the persuasive message. In the context of bone marrow donation, this framework provides clarification for the concept of altruism, in that individuals would generally perceive registration to be an altruistic act. Additionally, the constructs of subjective norm and personal experience spawn from this theory and its explanation that people rely on the opinions of important others when making decisions (Fishbein & Azjen; Rice & Atkin, 1989).

Effective Health Communication Campaign Design

Historically, health communication campaigns have focused on behavior change as a route to improved personal health. Traditional campaigns have concentrated on behavior change regarding issues such as smoking cessation, cancer, alcohol abuse, and AIDS. These campaigns have encouraged attitude and behavior change through theoretical frameworks such as Social Learning Theory (Bandura, 1977), Elaboration Likelihood Model (Petty & Cacioppo, 1986), and Theory of Reasoned Action (1975). Such campaigns have utilized the media as a primary means for dissemination of public persuasive messages. Organ and marrow donation campaigns are different from traditional campaigns in that they encourage behavior change that is dependent upon altruism, because it will help an unknown other, rather than oneself. Additionally, marrow donation campaigns are distinct in that they are generally not public campaigns, but community campaigns that depend on the local American Red Cross or blood bank to disseminate information.

According to Donohew (1990), the history of public health campaigns is one of expensive failure. He points out that the general assumption of campaigns should include multiple messages targeted at different audiences, while recognizing there is a practical limit to the number of different messages that can come out of a single campaign. Donohew addresses the importance of the cognition of persuasive messages. Donohew claims that recent campaigns, which report increased success, implement a more complex view of humans as "information processors, guided by both cognitive (Lazarus, 1982) and affective (Zajonc, 1982, 1984) forces" (p. 137). Donohew views information processing as "stimulus selection by affective and cognitive processes that range along a broad continuum from controlled to automatic" (p. 141). There has been debate (Lazarus, 1982, 1984; Zajonc, 1980, 1984) in recent decades as to which evidence type, affective or cognitive, exhibits more

persuasive impact on an individual. Lazarus (1982, 1984) exerts that cognition is more persuasive, while Zajonc claims that affect possesses more persuasive power.

Cognition and Affect

In recent years, there has been much discussion regarding the role of cognition and affect in the persuasion process (Chaudhuri & Buck, 1995). Chaudhuri and Buck categorize cognition and affect according to Tucker's (1981) definitions. Cognition is termed ***analytic cognition***, and is reason-oriented. It is this reason-oriented cognition that is expected to be evoked by the presentation of a statistical message. Affect, referred to as ***syncretic cognition***, is conceptualized as the notion of eliciting emotion; such emotion is expected to be elicited through the presentation of narrative evidence. Cognition and affect are clearly two different constructs that impact attitudes independently (Chaudhuri & Buck, 1995; Fabrigar & Petty, 1999). Due to the identification of cognition and affect as independent constructs, researchers have inquired about their impact on attitudes in the realm of persuasive health messages.

Evidence Type

Statistical Evidence Messages. According to Allen and Preiss (1997) a common element of statistical evidence is empirical statistics and facts used to summarize a larger number of cases. Ford and Smith (1991) point out that statistical evidence is the most common form of persuasion in the realm of organ donation. Baesler and Burgoon (1994) found that statistical evidence is more persuasive than narratives after a 2-day and 1-week delay. In addition, Kopfman et al. (1998) assert that individuals have been effectively persuaded to become potential organ donors by statistical evidence messages.

Narratives. Narratives appeal to human nature in that we are all storytellers and embrace stories with enthusiasm (Kopfman et al., 1998). According to Brosius and Bathelt

(1988), narrative evidence is easily comprehended, whereas statistical evidence can be difficult to process and comprehend. Thus, it is easy for us to process a large amount of information presented in this form. In addition, narratives are considered to be more vivid than statistical messages. Research acknowledges a vivid message as one that is able to attract and hold attention, excites imagination, and arouses emotions (Frey & Eagley, 1993). According to Frey and Eagley, vivid information has much more judgmental impact than pallid information. Therefore, narrative evidence about organ donors seems to be highly effective in persuading individuals to sign an organ donor card (Kopfman et al., 1998).

Kopfman, Smith, Ah Yun, and Hodges (1998) measured participants' cognitive and affective reactions to statistical and narrative messages that encouraged them to sign an organ donation card. Cognitive reactions were measured in three categories: number of thoughts (total, positive, and negative) generated by the message; message ratings of credibility, appropriateness, reliability, knowledgeability, thoroughness, and effectiveness; and causal relevance, which is the degree to which participants view themselves as similar to characters in the narrative and/or personally able to help solve the problem presented. Affective reactions were measured in terms of two factors: number of emotions (total, positive, and negative) generated by the messages and level of anxiety generated by the message.

In general, Kopfman et al. (1998) found that all of the cognitive dependent variables were affected more by statistical evidence, whereas all of the affective dependent variables were more strongly influenced by narratives. Specifically, Kopfman et al. found that more total thoughts and higher message ratings resulted from statistical messages. Contrary to their hypothesis, Kopfman et al. discovered that subjects who read statistical evidence reported greater causal relevance. Kopfman et al. also report that narrative evidence seemed

to arouse more anxiety and produce more total, positive, and negative emotions about organ donation than statistical messages.

Prior Thought and Intent

Research has shown that a participant's level of prior thought and intent has a significant effect on cognitive and affective response after reading a persuasive organ donation message (Smith et al., 1994; Kopfman et al., 1998). Kopfman et al. conceptualize prior thought and intent as the level to which an individual has previously considered signing an organ donor card and the level to which this consideration has prompted the planning of such an action. In particular, Smith et al. (1993, 1994) found that those high in prior thought and intent were more likely to exhibit higher positive belief and behavior change than those low in prior thought and intent.

Research (Donohew, 1990; Rosser et al., 1990; Backer et al., 1992) has emphasized the importance of audience analysis in the design process. Kopfman and Smith (1996) divide the audience into three distinct target audiences through the psychographic segmentation process (see also Backer et al.) by identifying targets that exhibit similar pre-existing attitudes or perspectives on organ donation. The three target audiences identified by Kopfman and Smith are 1) individuals who have already signed organ donor cards, 2) individuals high in intent to sign donor cards, and 3) individuals low in intent to sign donor cards.

Organ Donor Willingness Model

Kopfman and Smith (1996) developed the Organ Donor Willingness Model (ODWM) based on Fishbein and Ajzen's Theory of Reasoned Action (1975) and the work of Horton and Horton (1991). The ODWM puts forth five important variables in

understanding willingness to become an organ donor: altruism, knowledge, attitude, fear, and subjective norm.

Altruism. Macaulay and Berkowitz define altruism as "behavior carried out to benefit another without anticipation of rewards from external sources" (1970, p. 3). Based on this definition, signing an organ donor card is the altruistic ideal. The ODWM proposes that an individual's level of altruism will be positively related to their willingness to donate.

Knowledge. Kopfman and Smith conceptualize knowledge as the accurate or inaccurate understanding of facts about organ donation. The ODWM predicts that high levels of knowledge are associated with low levels of fear and positive attitudes toward donation, while low levels of knowledge are associated with higher levels of fear and neutral attitudes toward donation.

Attitude. Attitude is viewed as the general evaluation of organ donation as positive or negative, as well as the result of other beliefs and strength of those beliefs about organ donation. The ODWM suggests that a positive linear relationship exists between attitude toward donation and willingness to donate organs.

Fear. Horton and Horton (1991) identify fear as one of the most frequently reported reasons for not wanting to become a donor. Common fears include the following: abruptness associated with organ removal may lead to less medical attention or premature declaration of death; denial of own mortality; expenses that may be accrued by donor's family; and concern that donated organs will be given to wealthy or influential patients instead of someone in need (Lenehan, 1986). The ODWM suggests that fear will have a negative relationship with willingness to donate. However, the concept of fear is altered in the Marrow Donation Willingness Model in that fear might center around the discomfort of the procedure, rather than the fear of death commonly associated with organ donation.

Subjective Norm. Fishbein and Azjen (1975) conceptualize the subjective norm as the perception by important others of whether organs should be donated or not, as well as motivation to comply with the wishes of important others. The ODWM predicts that the subjective norm will have a positive relationship with willingness to donate.

Marrow Donation Willingness Model

This study applies the ODWM to the context of bone marrow donation. The present study has two main objectives: first, to determine whether statistical or narrative evidence is more persuasive; second, to apply the Organ Donor Willingness Model (Kopfman & Smith, 1996) to bone marrow donation to determine the relationship between prior thought and intent, as well as each of the five willingness factors, on reported intent to register with the NMDP.

In regard to the two types of message evidence presented by Kopfman et al. (1998), the question of which type of evidence is most persuasive in relation to bone marrow donation is unanswered. Therefore, the first goal of the current study is to ascertain if statistical or narrative evidence is most effective in persuading individuals to register with the NMDP as a potential bone marrow donor. Thus, the first research question of this study is extended:

> **RQ1: Will statistical or narrative evidence elicit the greatest persuasive effect on participants' intent to register with the National Marrow Donor Program?**

Research suggests that an effective health communication campaign discriminates among different groups within the target audience. The three audience segments identified by Kopfman and Smith (1996) can be applied to bone marrow donation in the following manner: 1) individuals who are already registered with the NMDP, 2) individuals high in

intent to register with the NMDP, and 3) individuals low in intent to register with the NMDP.

The Organ Donor Willingness Model, developed by Kopfman and Smith (1996), is a framework which helps communication scholars understand the factors that influence inclination to become an organ donor. This model can be superimposed on bone marrow donation to facilitate a further understanding of how the willingness factors (altruism, attitude, knowledge, fear, and subjective norm) effect an individual's intent to register as a potential bone marrow donor with the NMDP. The current study modifies the ODWM to fit the context of bone marrow donation. The Marrow Donation Willingness Model will include the additional concept of personal experience, which is the notion of knowing someone who has needed a bone marrow transplant, or caring about a person who has known someone who has needed a bone marrow transplant. The following research question is extended:

RQ2: Which of the willingness factors of the Marrow Donation Willingness Model (prior thought and intent, altruism, knowledge, attitude, fear, subjective norm, and personal experience) is most salient in the context of bone marrow donation?

In sum, existing research on persuasive organ donation messages can be generalized to facilitate an understanding of persuasive bone marrow donation messages. This literature shows that evidence types (statistical versus narrative) produce different cognitive and affective reactions (Donohew, 1990; Kopfman et al., 1998). Debate exists over which kind of evidence type is most persuasive. This study will examine whether statistical or narrative evidence is most effective in persuading individuals to register with the National Marrow Donor Program. Finally, the current study will adapt the Organ Donoation Willingness Model (Kopfman & Smith, 1996) to determine the relationship between altruism, attitude,

knowledge, fear, subjective norm, and personal experience with intent to register with the NMDP.

Method

A qualitative study was conducted; specifically, a focus group was employed to generate discussion on persuasive messages in relation to bone marrow donation. A focus group was the most appropriate method for this study in order to test whether the Organ Donor Willingness Model would be feasible in the context of bone marrow donation. Additionally, a focus group allowed participants to express their emotional reactions in a way that quantitative research would not.

Participants. Participants were selected to participate in a focus group discussion by the researcher on the basis of age and sex. The group consisted of eight residents of a mid-sized Midwestern city, who varied in age from 19 to 69 (average age 35), of which five were females and three were males, and seven were Caucasian and one was African American.

Procedures. Participants were instructed to meet at a neutral site on an established date and time. Upon arrival, participants were asked to complete a short survey regarding their age, sex, and race, as well as their attitudes toward bone marrow donation. After a brief introduction of the topic, the researcher presented a combination narrative and statistical message. Following the introduction, a statistical message was read to the group and they were given time to record their thoughts on paper. They were provided with the following prompts: "What about this message would persuade you to register as a potential bone marrow donor?" and "What about this message would <u>not</u> persuade you?" When all participants were done writing, a narrative message was read. Again, participants were given time to record their reaction to the message and given the same prompts. A discussion was

then facilitated about the persuasive and non-persuasive components of each message and an overall evaluation of which message was more persuasive. Participants were debriefed, thanked for their participation, and provided with National Marrow Donor Program brochures with complete registration instructions and contact information before departing.

Instrumentation. Kopfman and Smith's Organ Donor Willingness Model (ODWM, 1996) was adapted to become the Marrow Donation Willingness Model. Factors in the model were measured by items that tap into an individual's levels of altruism, knowledge, positive or negative attitude toward donation, personal experience, and fear. One item on the survey was devoted to the measurement of each of these constructs (See Appendix A). The survey measured participants' prior thought and intent, as well as their interest in registering before and after the focus group discussion (See Appendix B).

Results

Survey results indicate that one person had heard of the NMDP, but never thought of registering; four had been interested, but had not registered yet; two had never heard of the NMDP; and one was already registered. Six participants indicated that they had personally known someone who had needed a bone marrow transplant and five participants indicated that someone they care about has known someone in need of a bone marrow transplant. On a scale of 0-10, where 0 indicated no fear and 10 indicated highest fear possible, the average level of fear about bone marrow donation was 4.25. On a scale of 0-10, where 0 indicated total disagreement and 10 indicated total agreement, the average level of agreement with statements that evaluated attitude and altruism were 8.4, respectively. Additionally, half of the participants indicated an increased interest in registering with the NMDP as a result of the discussion group.

Participants indicated that Message 1 (statistical, see Appendix C) was persuasive because it noted that only 1 out of 3 patients find a match within their families. However, some participants felt that the statistics should be framed in a positive manner. For example, the statistic that the chances of finding a match within the Registry ranged from 1 in 100 to 1 in 1,000,000 was discouraging, rather than encouraging. In addition, participants mentioned that they required more information about the process of registering and donating in general before they could be persuaded to register.

Participants indicated that Message 2 (narrative, see Appendix D) was more persuasive in relation to two main themes: vulnerability and empathy. Participants indicated that this type of evidence made them feel vulnerable, as well as empathetic for the character in the narrative. For example, participants commented that the story "put them in the person's shoes" and made them realize that this kind of tragedy can happen to anyone. They were persuaded to register because they felt that they could identify with the woman in the story. Overall, focus group participants indicated that the emotional appeal of the narrative message was the most persuasive and resulted in greater willingness to register than the statistical message.

In regard to the Marrow Donation Willingness Model, knowledge was identified in the focus group discussion as the most salient factor. Participants noted that they required more information about the process of registering and donating in general before they could be persuaded to register. In addition, respondents indicated that it is important that this information should be framed positively and is visual depictions should not overly graphic in nature.

Discussion

The results of the focus group indicate that of the six willingness factors, knowledge is the most important in regard to persuading participants to register as a potential bone marrow donor. Additionally, narrative evidence proved to have more persuasive power than statistical evidence; participants noted that the narrative message was more appealing because it elicited emotions of vulnerability and empathy. One surprising finding was that statistical evidence, along with narratives, seemed to produce an affective response. For example, participants noted that some statistics made them feel discouraged, rather than encouraged, about registering with the NMDP. In light of these three findings, the most important factor when designing a persuasive health campaign is to frame the messages positively. The way that messages are framed will influence the emotional response and level of persuasion elicited from the audience. Future research could examine the various types of emotions that individuals may feel when they are exposed to different types of evidence (i.e. statistical, narrative, combination, or visual depictions). Specifically, this research could focus on the affective reactions that may result from the presentation of statistical evidence.

Conclusion

The objective of the current study was to determine what type of persuasive messages are most effective in encouraging people to register to be potential bone marrow donors, while examining how prior thought and intent and other willingness factors, such as altruism, attitude, knowledge, personal experience, fear, subjective norm, and personal experience, make individuals more willing to donate. The focus group discussion revealed that knowledge was the most salient willingness factor in the proposed model. Participants indicated that narrative evidence was most persuasive because of the emotional responses of vulnerability and empathy elicited by this type of message. In addition, one surprising result

was that an emotional response seems to result from the presentation of statistical messages as well. Specifically, that statistical messages are discouraging if the information is framed so that it seems that the chances of helping another individual are not likely. Thus, the positive framing of messages is most important in regard to their persuasive power.

The implications of this research for the NMDP are that its communication campaigns and brochures should provide information about the registration and donation procedures, and should primarily provide narrative evidence. In addition, all of this information should be framed positively in order to elicit the maximum persuasion. Future research should examine the unexpected link, suggested by this study, between statistical evidence and affective response.

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APPENDIX A

Welcome! Please take a moment while everyone arrives to fill out this brief survey regarding your thoughts about bone marrow donation. Please answer honestly; you are not expected to be an "expert" on this topic. Your responses will remain anonymous and confidential. **Thank you for your participation!**

Age: _____ Male or Female

Circle one:

A American Indian or Alaskan Native
B Black (non-Hispanic origin)
C White (non-Hispanic origin)
O Asian or Pacific Islander
S Hispanic
X Other _____

When it comes to registering with the National Marrow Donor Program (NMDP) as a potential donor, I have . . .

- ❑ heard about the NMDP, but never thought about becoming a donor
- ❑ been interested in registering with the NMDP, but haven't done it yet
- ❑ never heard of the NMDP
- ❑ already registered with the NMDP

I would rate my interest in registering to donate bone marrow as . . .

- ❑ Very interested
- ❑ Somewhat interested
- ❑ Little interest
- ❑ No interest

How knowledgeable do you feel you are on the subject of bone marrow donation?

- ❑ Very
- ❑ Somewhat
- ❑ Little
- ❑ None

Have you ever known someone who has needed a bone marrow transplant?

- ❑ Yes
- ❑ No

Has someone you care about (i.e., friend) known someone who has needed a bone marrow transplant?

- ❑ Yes
- ❑ No

On a scale of 0-10, where zero indicates no fear and ten indicates the highest fear possible, I would rate my fear about bone marrow donation as a _____.

On a scale of 0-10, where zero indicates total disagreement and ten indicates total agreement, indicate how much you agree or disagree with the following statements:

____ I feel that becoming a potential bone marrow donor would be a positive experience.

____ If I could save somebody's life, I would do everything possible.

As a result of today's discussion, I would rate my interest in registering to donate bone marrow as . . .

- ❑ Very interested
- ❑ Somewhat interested
- ❑ Little interest
- ❑ No interest

Please share any additional comments you might have regarding bone marrow donation or today's discussion:

Statistical Message

Bone marrow transplantation is a potential cure for persons ill with leukemia, Hodgkin's disease, sickle-cell anemia and 60,000 other blood related diseases for whom other treatments have been ineffective. Bone marrow is similar to blood in that it is comprised of different genetically determined types, called human leukocyte antigen (HLA) types. Family members, especially siblings, are a potential transplant recipient's best resource for a similar HLA type.

However, approximately only one in three patients finds a good bone marrow match among relatives. Because of this, the National Marrow Donor Program (NMDP) was founded in 1987 to recruit potential bone marrow donors and match them with individuals in need of bone marrow transplants. The chances of finding a perfect HLA match among an unrelated donor and recipient are relatively small – from 1 in 100 to 1 in 1,000,000. Therefore, the NMDP has had to create a large registry. Although there are currently 3.5 million potential donors registered, the NMDP is still searching for more volunteers, especially ethnic minorities, because they know they could save even more lives if the Registry was larger and more diverse.

Narrative Message

by Randolph Spivey
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When you look up the word "community" in the dictionary, it simply says "body of people living in one locale" or "body of people having religion, ethnic origin, profession, etc. in common." There is a broader community than that, however, and that is the community I wish to address today.

It is the vast community of people who know what it means to love their families, who know they would do anything within their power to save the lives of their loved ones. I write for these people, which I'm sure includes most of you, because I want to share the story of my wife, Katie.

Katie and I got married in 1986 -- the second marriage for both of us. We have four children from our previous marriages, and she is a wonderful wife and mother. I've always thanked God for bringing us together.

Katie likes painting, drawing, sewing and photography; she never likes to be bored. She worked as a seamstress until she went to hairstyling school and pursued her dream of owning a salon. The American dream seemed to be coming true for us when Katie's Hair Plus became successful here in Louisburg. But the dream turned to a nightmare when Katie began feeling sick.

In January of this year, Katie was diagnosed with acute leukemia, a cancer of the bone marrow. Our family and friends were absolutely devastated in the truest sense of the word. After much chemotherapy, the cancer is in remission. But Katie's doctor is recommending a bone marrow transplant to save her life. Without a transplant, Katie has a 5 percent chance of overcoming her disease.

First, Katie must find a donor with matching marrow. Sisters and brothers are the first option as possible donors, but none of her eight siblings was a match. So Katie now must find a donor on the National Marrow Donor Program Registry, a computerized list of more than 3 million possible donors and their marrow types.

It is sometimes very difficult to find a match. That task is made even more difficult because Katie is African-American. Marrow tissue types are inherited just like skin and hair color, meaning that a person is more likely to find a donor within his or her own ethnic group. Unfortunately, the number of minorities on the donor Registry are not enough for all of the minorities who must find a donor.

My Katie's future depends on how my community responds -- not just the African-American community, but the community of all races who love their wives, their husbands, their sons, their daughters. Many people are out there looking for matches throughout the nation and world -- people like Katie. There have been -patients in North Carolina who have found donors in places like Germany and the Netherlands, bringing to mind the words of a song: Indeed it is a "small world after all." These people joined the donor Registry, fully understanding that

"community" is not so much about living down the street from someone but reaching out to others.

And so I turn to my "neighbors" here in the Triangle area -- African-American, Caucasian, Hispanic, Latino, Asian, Native American and all the other beautiful people of different races and backgrounds -- and encourage you to join the Registry.

All it takes is a quick blood test. One of you might just be the donor for Katie we've been looking for, praying for, hoping for. One of you might be able to save the life of someone else waiting for a donor.

Put yourself in my shoes for a moment. Think of your loved ones. Think of the times you've shared and the memories you've made together. Dream of the future you want to have with them. Then imagine that future falling apart, disappearing, all because of something called leukemia.

But Katie has a chance. She has hope. Her hope lies in people like you coming out to join the Registry. Perhaps you can be an answer to someone's prayers.